

## REPORT ON MACHINERY.

No. 175 07.

Received at London Office WED. AUG. 13, 1919

Date of writing Report 1st August 1919. When handed in at Local Office 1st August 1919. Port of Greenock.  
 No. in Survey held at Port Glasgow. Date, First Survey 1st April, 1919. Last Survey 1st April 1919.  
 Reg. Book. on the Steel Screw Steamship "Lear Mogul". (Number of Voids 2). Tons { Gross 5548.00  
 Net 3422.17.  
 Master R. Parker Built at Port Glasgow By whom built Robert Duncan & Co. Ltd. When built 1919.  
 Engines made at Glasgow. By whom made David Rowan & Co. Ltd. when made  
 Boilers made at By whom made when made  
 Registered Horse Power Owners The Shipping Controller Port belonging to London.  
 Nom. Horse Power as per Section 28 517 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

## ENGINES, &amp;c.—Description of Engines

No. of Cylinders

No. of Cranks

Dia. of Cylinders Length of Stroke Revs. per minute Dia. of Screw shaft as per rule as fitted Material of screw shaft  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube Is the after end of the liner made water tight  
 in the propeller boss If the liner is in more than one length are the joints burned If the liner does not fit tightly at the part  
 between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two  
 liners are fitted, is the shaft lapped or protected between the liners Length of stern bush  
 Dia. of Tunnel shaft as per rule as fitted Dia. of Crank shaft journals as per rule as fitted Dia. of Crank pin Size of Crank webs Dia. of thrust shaft under  
 collars Dia. of screw Pitch of Screw No. of Blades State whether moveable Total surface  
 No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work  
 No. of Bilge pumps Diameter of ditto Stroke Can one be overhauled while the other is at work  
 No. of Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room In Holds, &c.

No. of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size  
 Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible  
 Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Discharge Pipes above or below the deep water line  
 Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate yes  
 What pipes are carried through the bunkers How are they protected  
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times  
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges  
 Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

## BOILERS, &amp;c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers  
 Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate  
 Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to  
 each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear  
 Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates  
 Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams  
 long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps  
 Per centages of strength of longitudinal joint rivets plate Working pressure of shell by rules Size of manhole in shell  
 Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter  
 Length of plain part top bottom Thickness of plates crown bottom Description of longitudinal joint No. of strengthening rings  
 Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom  
 Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules End plates in steam space:  
 Material of stays Area at smallest part Area supported by each stay Working pressure by rules Material of stays  
 Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of Front plates at bottom  
 Area at smallest part Area supported by each stay Working pressure by rules Working pressure of plate by rules  
 Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules  
 Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays  
 Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and  
 thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each  
 Working pressure by rules Steam dome: description of joint to shell % of strength of joint  
 Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes  
 Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed  
 SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to  
 Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler  
 Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

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IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - (1919) April: 1-7.  
During erection on board vessel - - -  
Total No. of visits 2.

Is the approved plan of main boiler forwarded herewith

“ “ “ donkey “ “ “

Dates of Examination of principal parts—Cylinders Slides Covers Pistons Rods

Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller

Stern tube Steam pipes tested Engine and boiler seatings Engines holding down bolts

Completion of pumping arrangements Boilers fixed Engines tried under steam

Completion of fitting sea connections 7-4-19 Stern tube 1-4-19 Screw shaft and propeller 7-4-19.

Main boiler safety valves adjusted Thickness of adjusting washers

Material of Crank shaft Identification Mark on Do. Material of Thrust shaft Identification Mark on Do.

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.

Material of Steam Pipes Test pressure

Is an installation fitted for burning oil fuel Is the flash point of the oil to be used over 150°F.

Have the requirements of Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.

Vessel taken to Glasgow for machinery to be fitted.

H.C.  
11.8.19.

Certificate (if required) to be sent to  
The Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee ... £	:	:	When applied for.
Special ... £	:	:	19
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) £	:	:	19

Graham Robertson.  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 12 AUG 1919 FRI. MAR 19 1920

Assigned See Glasgow Report No 39002.



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